costs are not part of studies filed by SWBT. Thus, he concludes that "cost issues cease to be of primary importance in this proceeding."

Nothing could be further from the truth. No point has been resolved simply because SWBT essentially says, "Trust us, we've been doing this for years – the studies have been done correctly." Cost issues are of paramount importance. If incumbent LEC unbundled elements are priced inappropriately high, local exchange competition will never have a chance to get off the ground.

Third, Mr. Lundy suggests on page 11, Answer 22, that parties are seeking to make cost issues unnecessarily arcane or complex in an attempt to "engage in obfuscation of very straight-forward issues."

Mr. Lundy implies that AT&T should accept what SWBT has offered as "cost studies" on faith, and that any pointing out of fallacies in SWBT studies, or the provision of AT&T's own studies, are attempts to unnecessarily confuse the issues. The truth is that AT&T is doing quite the opposite – it is not making cost issues unnecessarily arcane or complex, rather it is clarifying what proper cost studies should be in order for this Commission to have the opportunity to use properly developed costs in the development of reasonable rates

Q. DO YOU TAKE ISSUE WITH STATEMENTS BY SWBT WITNESS SMITH?

A. Yes. Similar to Mr. Lundy and Mr. Moore, Ms. Smith testifies that "[T]he Commission can rely on SWBT's LRIC cost results as a basis for the price floor..." (Smith testimony, page 13), and "...the Commission should rely on SWBT's TELRIC cost study results..."(Smith testimony, page 14). As discussed elsewhere in my testimony, the cost studies produced by SWBT are far too flawed to be relied upon by the Commission.

IV. EVALUATING COST STUDIES

Q. PLEASE DESCRIBE THE CRITERIA BY WHICH THE COMMISSION SHOULD JUDGE COST STUDIES FILED IN THIS PROCEEDING.

A. To provide useful outputs for the pricing issues in this proceeding, a cost model must satisfy several requirements:

- A cost model must faithfully apply forward-looking economic cost principles, as required by the FCC.
- The model must focus on the costs attributable to efficient provision of the service or element under study and not incorporate the costs to provide unrelated, advanced, or other functions. For example, loop costs should not include the costs of spare capacity placed to respond to other present or potential future opportunities.
- The model's purpose, philosophy, and computations must be well documented
- The model's input assumptions and values must be readily apparent and verifiable.
- The model's outputs must be computationally reproducible. "Black box" outputs from up-stream studies should not be used.

Q. WOULD YOU PROVIDE A BRIEF SUMMARY OF THE PRINCIPLES THAT SHOULD GUIDE A TOTAL SERVICE (OR ELEMENT) LONG RUN INCREMENTAL COST (TSLRIC OR TELRIC) STUDY?

A. Yes. As discussed by AT&T witness Dr. Thomas M. Zepp, and as required by the FCC, there are several essential principles which should be followed in any TELRIC analysis:

1. TELRIC measures only the long-run costs of providing the cost object in question. Costs must be measured over a sufficiently long period of time so that any element-specific or service-specific cost becomes variable. FCC Order, ¶677.

2. TELRIC measures only the forward-looking costs of providing the cost object in question. TELRIC must measure forward-looking costs, not historic, embedded or book costs. Id. at ¶672.

3. TELRIC is based on the costs that an efficient, cost-minimizing competitor would incur -- i.e., the costs of assets that are optimally configured, sized, and operated. Proper measures of TELRIC must exclude the costs of inefficient design or operations because those costs cannot be recovered in competitive markets and would weaken incentives for incumbent Local Exchange Carriers (incumbent LECs) to operate efficiently. Id at ¶685

4. TELRIC includes only the additional costs of providing the particular cost object(s), holding constant the supplier's output of all other items. TELRIC includes only those added costs that are attributable to production of the cost object(s). Id. at ¶675.

5. TELRIC is based on the entire demand of all uses and users of the cost object. TELRIC includes the economic costs of serving the total demand of all uses and users of a network element or service, including the demand of the supplying LEC. Id at ¶677

6. TELRIC should reflect any significant geographic cost differences. TELRIC estimates should reflect any significant geographic differences in cost, to the extent that these cost differences are reliably measurable. Id at ¶¶691,764.

Q. ARE THERE OTHER REQUIREMENTS SPECIFIED BY THE FCC FOR A PROPER TELRIC STUDY?

A. Yes. There are numerous requirements, including the following:

- SWBT must provide specific explanations of: (1) why and how specific functions are necessary to provide network elements; and (2) how the associated costs were developed. FCC Order, ¶ 691.

- SWBT must prove to the state commission the nature and magnitude of any forward-looking costs it seeks to recover in the prices of interconnection and unbundled elements. Id. at ¶¶ 680, 695.

- SWBT must demonstrate that it used reasonably accurate estimates of the proportion of a facility that will be filled with network usage (i.e., fill factors). Id. at ¶ 682.

- SWBT's studies must develop costs from a forward-looking economic cost methodology based on the most efficient technology in its current wire center locations taking into consideration the entire quantity of the network element provided. Id. at ¶¶ 685, 690.

- SWBT cost studies must also use a planning period which is "long enough that all costs are treated as variable and avoidable." Id. at ¶ 692.

Q. ARE THERE COSTS THAT THE FCC STATES MUST BE EXCLUDED IN SWBT'S COST STUDIES?

A. Yes, again the FCC is very definitive in this regard. SWBT must exclude the following items from its cost studies:

- Marketing, consumer billing, or other costs associated with retail services. FCC Order, ¶¶ 691, 694.

- "Additional profit" in its rates for interconnection and access to unbundled elements because the TELRIC methodology itself provides for a reasonable profit. Id. at ¶ 699.

- Any allowances in cost recovery and rate setting for embedded costs (¶ 704), opportunity costs (¶ 708), or universal service subsidies (¶ 712). Furthermore, the FCC determined that a state commission may not implement mechanisms that have the effect of recovering any non-cost-based amounts. Id. at ¶ 713.

V. LEC COST STUDY REQUIREMENTS

A. THE COMMISSION REQUIREMENTS

Q. WHAT DID THE COMMISSION REQUIRE SWBT TO PROVIDE REGARDING COST STUDIES?

A. The Commission required SWBT to produce "the following cost studies, for those services in dispute, no later than one hundred sixty (160) days after the receipt of a request for negotiation..." (OAC 165:55-17-25).

B. FCC REQUIREMENTS

Q. WHAT ARE THE FCC GUIDELINES REGARDING THE VERIFIABILITY OF INCUMBENT LEC COST STUDIES?

A. The FCC painstakingly laid out several key observations and guidelines regarding incumbent LEC cost studies. It recognized that the incumbent LECs have greater access to the information. Given this asymmetric access to cost data, the incumbent LECs must prove the nature and magnitude of any forward-looking costs that they seek to recover in prices of interconnection and unbundled elements. FCC Order, ¶¶ 680, 695. It also

recognized the importance of the incumbent LECs providing cost studies that can be reviewed and verified by all affected parties, as well as the state commissions. Id. at ¶ 155. Therefore, the FCC requires the states to create a record sufficient for the purposes of review. Id. at ¶ 619.

VI. SWBT COST STUDIES

A. DESCRIPTION

Q. DID SWBT PROVIDE ANY COST STUDIES DURING NEGOTIATIONS?

A. No. AT&T requested that SWBT provide all cost studies during negotiations and none were provided. AT&T requested the studies to be able to determine if SWBT's proposed prices for each service, network function, or charge in the Interconnection Agreement were just and reasonable, and consistent with the pricing policies included in the Federal Telecommunications Act of 1996 (Federal Act).

Q. WHAT COST STUDIES DID SWBT PROVIDE?

A On or about August 21, 1996, SWBT made available for inspection only at its Oklahoma City offices the results of approximately 29 cost studies and highly sensitive confidential answers to certain of AT&T's requests for information. The highly sensitive confidential information provided consisted of approximately 264 pages. A list of the cost study results that SWBT provided is attached to my testimony as Attachment DPR-2.

On or about September 9, 1996, SWBT produced highly sensitive confidential responses to additional requests for information by AT&T, as well as cost study results relied upon by its cost witnesses, Ms. Smith, Mr. Lundy, and Mr. Moore. A list of the cost study results that SWBT provided is attached to my testimony as Attachment DPR-3.

Q. DID SWBT PROVIDE ACTUAL COST STUDIES, AS OPPOSED TO JUST RESULTS OF COST STUDIES?

A. No. SWBT failed to produce the cost "studies" that support its results until September 18, 1996, and even then only produced minimal information. No significant or adequate amount of supporting materials was provided. I will describe in more detail below, the failings of the studies that SWBT has produced.

Q. DO THE COST STUDIES PROVIDED BY SWBT COVER ALL OF THE PRICE ELEMENTS REQUIRED BY THE FCC?

A. No. Of the seven unbundled network elements required by the FCC, SWBT has not provided cost studies for four: (1) Operator Systems & Directory Assistance, (2) Transport, (3) Network Interface Device (NID) and (4) Support Systems. According to SWBT witness Moore, TELRIC studies for Transport and NID are under development and will be provided at some unidentified date. Also, SWBT witness Lundy states that TELRIC studies for Operator and D.A. and Support Systems are not yet complete. Mr Lundy states that D.A. studies will be complete October 4, 1996 and a study for support systems is not scheduled.

B. GENERAL CRITICISMS OF SWBT COST STUDIES

Q. DO SWBT'S STUDIES FULFILL THE REQUIREMENTS IMPOSED?

A. No. The studies produced by SWBT are completely inadequate and do not meet the FCC requirements of OAC 165:55-17-25 because they do not include adequate underlying work papers.

Q. WHAT IS THE IMPACT OF SWBT'S NON-COMPLIANCE WITH OAC 165:55-17-25?

A. Without the appropriate supporting information, the cost studies produced by SWBT are of little or no value to the Commission, AT&T, or any other party for use in determining appropriate, TELRIC-based rates as required by the FCC Order.

Q. WHY DOES LACK OF SUPPORTING INFORMATION RENDER THESE STUDIES TO BE OF LITTLE OR NO VALUE?

A Without complete and proper documentation, back-up information, and underlying work papers, it is impossible to perform a comprehensive evaluation of the studies to determine if the studies: (1) are based on embedded costs versus forward-looking costs; (2) use correct TELRIC methodology; (3) are based on valid and appropriate assumptions; or (4) use proper inputs and calculations.

Q. DO THE STUDIES PRODUCED BY SWBT MEET THE REQUIREMENTS OF THE FCC ORDER?

A. No, for several reasons:

- SWBT failed to explain with specificity why and how specific functions are necessary to provide network elements and how the associated costs were developed for each cost study.

- SWBT has not demonstrated that it used reasonable, appropriate fill, depreciation, cost of money, or numerous other factors.

- SWBT has not demonstrated that its studies are based on a forward-looking economic cost methodology using the most efficient technology, its current wire center locations, or that it took into consideration the entire quantity of the network element provided.

Q. WHAT IS THE IMPACT OF SWBT'S FAILURE TO COMPLY WITH THE FCC ORDER ON ITS STUDIES?

A Without the appropriate supporting information, the cost studies produced by SWBT are of little or no value to the FCC, the Commission, or any other party for use in determining appropriate, TELRIC-based rates as required by the FCC Order. SWBT's "black box" inputs to its studies produce unsupported results and do not permit the Commission or AT&T to determine whether the rates that would result from their use would be reasonable as required by the FCC Order, ¶ 155.

Q. HAS AT&T PREPARED COST STUDIES THAT MEET THE FCC AND THE COMMISSION REQUIREMENTS YOU HAVE OUTLINED?

A. Yes. AT&T is sponsoring the Hatfield Model cost study, which meets the TELRIC methodologies established by the FCC. During negotiations AT&T provided the outputs of its cost studies and offered to provide copies of the cost studies upon which it would rely. The AT&T cost studies previously were filed with the FCC and rely on publicly gathered data and, therefore, were not treated as proprietary and were not withheld. Therefore, I recommend that the Commission rely on the results of AT&T's cost studies.

Q. WHY SHOULD THE COMMISSION RELY ON THE HATFIELD STUDIES INSTEAD OF ON SWBT'S COST STUDIES?

A. The limited access SWBT has provided to its studies and supporting data make it impossible for any meaningful discourse on their accuracy or validity to the Commission. Such discourse is vital to the Commission's ability to make an informed decision about the appropriate costs and prices for SWBT to charge for carrier-to-carrier interconnection and prices for unbundled network elements. In contrast, and as discussed by Mr. Flappan, the Hatfield Model employs non-proprietary data, uses readily apparent methodologies, is totally accessible and verifiable, and is fully consistent with the FCC Order.

C. SPECIFIC CRITICISMS OF SWBT COST STUDIES

Q. PLEASE DESCRIBE WHAT INFORMATION IS MISSING FROM THE SWBT COST STUDIES THAT IS NECESSARY FOR A COMPLETE EVALUATION OF THE STUDIES.

A SWBT's studies fall short of the FCC requirements in several general areas:

(1) **Investment Figures:** SWBT included dollar amounts of "investment" or Engineered, Furnished and Installed (EF&I) as starting points of cost studies, with no information provided as to the source or development of the figures. Critical inputs to the models that produced the investment outputs include such items as optional study methods (i.e., average or marginal cost study), technology selections, model switching office data, assumed supplier discounts, capacity utilization, fill factors, and more. In fact, in some cases, the only values produced are the bottom line purported "incremental costs" generated from other studies, which were not produced or discussed by SWBT.

(2) **Factors Used:** Numerous calculations were made within the studies using various "factors." These factors include: ratio of material to EF&I, TELCO engineering, TELCO plant labor, sundry & miscellaneous or shipping expense, power investment, fill (as distinguished from fill factors used in computing the investment figures above), building investment, depreciation, cost of money, income tax, equipment maintenance, building & grounds maintenance, ad valorem taxes, the Commission assessment, and inflation factors for capital cost data and for annual expense data. SWBT did not produce any justification, derivation workpaper, or adequate explanation of the factors in the studies.

(3) **Models Used:** Many of SWBT's cost studies incorporate other cost models, such as ACES, DUECES, and SCIS. The cost models themselves were not provided; no supporting documentation or work papers to substantiate, explain or justify the models were provided, nor did SWBT provide a complete set of the inputs, outputs, parameters,

or assumptions for the outputs from the cost models. Thus, it is impossible to describe or to review the methodology employed by these models to produce SWBT's outputs used in the cost studies, let alone verify the results.

(4) **Other Inputs:** Other underlying workpapers items are missing, such as: SWBT's Operator Services Cost Manual; cost factors development support; sources of information used in the studies, including Minutes of Use (MOUs), access lines in use, and installed access line capacity by switch; access line sample studies used in loop cost studies; and derivation of loaded labor rates.

(5) **Results:** The resulting figures from several of the SWBT Oklahoma studies are above the range of the FCC proxy figures, which should be considered a ceiling. The FCC Proxy figures are:

Local Loop	$17.63
Local Switching (including port and usage)	$0.002 - $0.004
Tandem Switching	$0.0015

Q. IN ADDITION TO THE MISSING OR INCOMPLETE INFORMATION THAT YOU HAVE NOTED REGARDING SWBT'S COST STUDIES, ARE THERE OTHER MATERIAL DEFECTS IN THE COST STUDIES?

A. Yes. While most information was totally unavailable, and SWBT Oklahoma did not produce some of the limited information until September 18, 1996, giving inadequate time for review of the Oklahoma specific information, I also take issue with several items based, in part, on my review of SWBT studies and extensive documentation provided in Texas. Because my review is continuing, I provide a non-exhaustive list of examples of items that appear wrong, or, at a minimum, questionable.

Q. SINCE YOUR ANALYSIS IS BASED IN PART ON YOUR REVIEW OF SWBT'S TEXAS COST STUDIES, IS IT ALSO APPLICABLE TO THE OKLAHOMA STUDIES?

A. Yes. Based on a review conducted on the Oklahoma studies at my direction, and my review of the Texas studies, the items with which I take issue in the Texas studies are representative of what I believe to be the same or similar problems with the Oklahoma studies.

Q. WHAT ARE THE DEFECTS YOU HAVE IDENTIFIED IN THE SWBT TEXAS STUDIES WHICH YOU BELIEVE ARE ALSO GENERALLY APPLICABLE TO THE OKLAHOMA STUDIES?

A I will discuss six significant defects: (1) unreasonable fill and/or equipment discount factors, (2) unreasonable depreciation expense factors, (3) inconsistent factors, (4) non-forward-looking studies (5) questionable factors, and (6) questionable outputs.

Q. PLEASE EXPLAIN THE FIRST DEFECT – UNREASONABLE FILL, UTILIZATION, AND/OR EQUIPMENT DISCOUNT FACTORS.

A. I believe that SWBT may have overstated its costs as compared to efficient forward-looking costs by using unreasonably low fill or utilization factors for many kinds of network plant. While on the surface some of SWBT's studies imply that costs are based on full utilization of the item under study, there is little or no documentation of the actual operational or objective fill or utilization factors that SWBT used for loop components, switching systems, or other cost components. Inappropriate fill and utilization factors do not reflect only the necessary space for basic telephony capacity, but may include the costs of excess capacity added in anticipation of providing advanced narrowband and/or broadband services, or may reflect historical underutilization of an overbuilt network.

In addition to fill and utilization factors, SWBT has the capability to incorporate a variety of options that will dramatically affect its cost study outputs for switching-related costs. Using the Switching Cost Information System (SCIS) model, SWBT can choose between the "average" cost or "marginal" cost methods and the levels of vendor discounts. The FCC observed in its December 15, 1993 Order in its Open Network Architecture docket,[2] that the choice of study methods has a substantial effect on the unit investments developed by SCIS. At least a portion of SWBT's studies should be based on the marginal cost version of SCIS

[2] *In the Matter of Open Network Architecture Tariffs of Bell Operating Companies*, CC Docket No. 92-91, (rel. December 15, 1993) at 12

Similarly, SCIS has the ability to vary the amount of vendor discount assumed in computing switching-related costs. While SWBT may regularly get substantial vendor discounts for quantity purchases or long-term contracts, SWBT may not have correctly reflected estimates of forward-looking discounts in its present studies.

Q. WHAT IS THE IMPACT OF UNREASONABLY LOW FILL, UTILIZATION, OR DISCOUNT FACTORS?

A. When SWBT assumes low fill, utilization, and discount factors, it increases the identified cost associated with utilized capacity which can drive the final calculated cost. For example, if some loop plant has 100 pairs of wires available for use, yet SWBT assumes that only 25 of those pairs will be used, those 25 pairs will be assessed the full cost of 100 pairs. The impact is obvious. New entrants could be assessed high rates for SWBT's inefficient development of embedded plant or improperly assessed for efficient plant. As shown on Attachment DPR-4, investment outputs from SWBT's models could easily double or triple and the calculated forward-looking cost would increase proportionately.

Q. YOUR SECOND IDENTIFIED DEFECT IS UNREASONABLE DEPRECIATION EXPENSE FACTORS. WOULD YOU PLEASE EXPLAIN?

A SWBT employs unrealistically short depreciation lives in some instances. These undocumented and unsupported asset life assumptions may reflect the lives of assets used to provide services that may face rapid technological and market obsolescence rather than those of basic telephony, the basic building blocks of many of the elements requested by

AT&T. As described in the FCC Order, use of last approved depreciation lives is authorized, and the burden is on the LECs to prove alternative shorter depreciation lives is appropriate. FCC Order, ¶ 702. SWBT provided no factual record or work papers to substantiate the depreciation lives used in its studies. However, SWBT did provide information in Oklahoma City that confirms that it has used depreciation rates far above those last approved by the FCC.

Q. PLEASE EXPLAIN THE THIRD DEFECT – INCONSISTENT FACTORS.

A. SWBT is inconsistent in its use of several factors. Throughout the studies presented in Texas, there are no fewer than five different "Commission Assessment" factors used. I also found that differing inflation factors were used across studies of similar planning periods. In all but one study, whenever non-recurring charges were developed, completely undocumented loaded labor rates were used. Across the studies produced, there were, to name only one of many examples, more than ten different loaded labor rates specified for a single occupational work level that varied in a range from under $20 per hour to nearly $50 per hour. SWBT also loads its rates with an allowance for building costs that are already recovered in some investment studies, thus leading to double recovery. Each of these inconsistencies raises concerns about which studies, if any, are based on the correct factors.

Q. THE FOURTH DEFECT YOU IDENTIFIED IS THAT SWBT USES NON-FORWARD-LOOKING STUDIES. PLEASE EXPLAIN.

A. While the documentation provided is totally inadequate in determining whether SWBT's studies are forward-looking, there are indications in some of the Texas studies that they are not. For instance, one study assumes that SWBT employees will be required to manually update SWBT databases based on information provided by a new entrant, even though mechanized updates performed by the new entrants is more likely. Some non-recurring studies have significant amounts included for "corrective actions," "problem resolution," and "manual order entry." The local switching study relies on incomplete switch-by-switch cost data which is then aggregated. Thus, I believe that SWBT is using embedded cost information in a number of instances. In many cases, particularly where manual instead of mechanized processes are assumed, costs will be overstated.

Q. PLEASE DISCUSS YOUR FIFTH IDENTIFIED DEFECT – QUESTIONABLE FACTORS.

A SWBT's depreciation, cost of money, and income tax factors are interrelated for a given investment. However, in several instances, the usual relationship between the factors seems to be violated without explanation. For example, SWBT has recently updated its Texas building investment factor study, but it did not reflect the new lower building investment factors in all of its studies. Another example is equipment maintenance factors which seem to be overstated in comparison even to current SWBT costs. Finally, SWBT's studies seem to indiscriminately apply inflation factors to both capital costs and expenses. The overall effect of these issues is that SWBT's costs are likely to be overstated.

Q. YOUR SIXTH AND FINAL IDENTIFIED DEFECT IS QUESTIONABLE OUTPUTS. PLEASE DISCUSS YOUR CONCERNS.

A. Aside from the general "black box" nature of SWBT's studies, some studies produce results that are simply wrong by observation or at least very counter-intuitive. Others produce outputs for which the purpose is unclear and potentially inappropriate.

For example, SWBT specifies that the cost of a 4-wire service is exactly twice that of a 2-wire service. This cannot be true since a 2-wire service cost includes all the costs for drop wire and protector or network interface device. This full cost should not be recovered twice in a 4-wire application.

In yet another study, SWBT produces cost estimates for a five-year period. The identified costs per unit decline for two years and then abruptly increase for two years. This result, too, seems counter-intuitive.

In yet another study, SWBT identified its cost to produce all white page directories in Texas and then revised the study to reflect only the top 20 white pages directories. Significantly, SWBT asserts that those top 20 directories account for a vastly disproportionate share of white page directory costs.

In the study "Forward Looking Common Costs," SWBT calculated an alleged ratio of common costs to total TELRIC. SWBT based its calculations on combined regulated and unregulated operations. Since the intention is to apply this factor against the TELRIC developed in other studies, this use could be an inappropriate double counting of common costs, to the extent that the TELRIC studies may already include common costs.

D. IMPACTS OF DEFICIENT AND DEFECTIVE COST STUDIES

Q. WHAT IS THE OVERALL IMPACT OF SWBT'S FAILURE TO COMPLY WITH THE COST STUDY REQUIREMENTS PRESCRIBED BY THE FCC?

A. The defects I have identified so permeate SWBT's cost studies, that the studies simply should not be used at this time. Uncertainties about fill and utilization factors and vendor discounts, which I have shown can produce significant variation in study outputs, impact many of the studies presented by SWBT. These potential defects impact all loop studies, local switching and tandem switching studies, line- and trunk-side port studies, and interim number portability studies.

All studies which compute non-recurring rates or volume insensitive costs based on labor rates are questionable because the labor rates used across the set of studies are inconsistent, and, even where documented, are obviously flawed. These studies include Operator Transfer, Directory Assistance, D.A. Call Completion, Local and IntraLATA Operator Assistance, Joint DA and DACC, Installation charges for local loops, Trunks and ports, among others.

I would also characterize many of the studies as accumulations of "black box" outputs from other studies. These include the critical unbundled loop studies. In these studies, SWBT presented listings of other cost study outputs and performed a few manipulations to reach a new bottom-line result. In many, if not most cases, there was no support documentation of any sort provided for the source studies' outputs.

Nearly every one of SWBT's cost studies are intended to develop the cost of elements which are critical inputs to products for new entrants. SWBT bears the burden of proof to show that its studies comply with the requirements of the FCC Order. SWBT has failed to demonstrate that its studies are reasonable, even with the limited review I have been able to perform due to the lack of underlying work papers and documents. SWBT's failures are numerous and obvious and, therefore the SWBT studies must be rejected.

VII. SUMMARY

Q. WILL YOU PLEASE SUMMARIZE YOUR TESTIMONY?

A I have discussed the elements of good cost studies and the recent cost study requirements established by the FCC. I have shown that SWBT has failed to produce cost studies that meet the requirements of the FCC. Consequently, I conclude that SWBT's studies do not merit any consideration by the Commission. They are unsupported, undocumented, and contain numerous errors and should be rejected. Instead, the Commission should,

wherever possible, rely on the Hatfield Model outputs sponsored by AT&T witness Dr. Robert Flappan.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes.

PREVIOUS TESTIMONY OF DANIEL P. RHINEHART

Date Filed	State	Proceeding Number	Subjects Addressed
9/96	Texas	Docket 16226	Arbitration Cost Studies of SWBT - Texas
6/96 7/96	Kansas	190,492-U	Universal Service Fund, Alternative Regulation, Imputation
1/96	Texas	Docket 14659	Costs of SWBT and GTE loop facilities
1/96	Texas	Docket 14658	Resale of SWBT and GTE services under PURA
9/95	California	A.95-02-011 A.95-05-018	Uniform System of Accounts Rewrite rate adjustments
6/95	Missouri	Case TR-95-241	SWBT Local Plus service offering
8/94 2/95	California	A.93-12-005 I.94-02-020	Citizens Utilities General Rate Case, Access Pricing, Price Cap, IntraLATA Equal Access, Imputation
4/93	California	A.92-05-002 A.92-05-004 I.87-11-033	First Price Cap Review, productivity factors, sharing
6/92	California	I.87-11-033	Centrex and PBX trunk Pricing
10/91	California	I.87-11-033	Competitive entry issues
1/91	California	A.85-01-034	High Cost Funding
10/90	California	I.87-11-033	Expansion of Local Calling Areas, Touch Tone

SWBT
ARBITRATION COST RESULTS
OKLAHOMA
8/21/96

		Pages
1.	8 dB Loop	2
2.	5 dB Loop	2
3.	Basic Rate Interface Loop	3
4.	Special Access DS1 & DOVlink	14
5.	Line Side Ports	2
6.	1996 Unbundled Network Cross Connections	6
7.	Expanded Interconnection Access Service	4
8.	2-Wire Analog Trunk Port (DID)	3
9.	Basic Rate Interface	2
10.	Primary Rate Interface	2
11.	Interim Number Portability	5
12.	E911 Incremental Network	3
13.	E911 Database Management Systems & ALIS	3
14.	White Pages	2
15.	Oklahoma Resale Avoided Cost Analysis	4
16.	Oklahoma Resale Start-up Cost Analysis	2
17.	Company Resale Start-up Cost Analysis	2
18.	Oklahoma FCC Approach to Resale Avoidable Cost	2
19.	Standard Operations Work Seconds - IEC	2
20.	Local & InterLATA Operator Assistance - IEC	7
21.	0 - Transfer IEC	2
22.	DA - IEC	3
23.	DA Call Completion - IEC	3
24.	All States Directory on the Street	3
25.	joint DA & DACC - IEC (Oklahoma)	2
26	Local & IntraLATA Operator Assistance - IEC (GHQ)	2
27.	Joint Operator Services - IEC (GHQ)	2
28.	Joint DA & DACC - IEC (GHQ)	2
29	DA - IEC (GHQ)	2
	Total	93

SWBT
ARBITRATION COST RESULTS
OKLAHOMA
9/9/96

		Pages*
1.	OKLAHOMA TELRIC UNBUNDLED LOCAL LOOP STUDY 1996-1999	3
2.	OKLAHOMA TELRIC UNBUNDLED LOCAL LOOP DB LOSS CONDITIONING STUDY 1996-1998	3
3.	OKLAHOMA 1996 UNBUNDLED NETWORK COMPONENT CROSS-CONNECT COST STUDY	6
4.	OKLAHOMA ANALOG LINE-SIDE PORT STUDY 1996-1998	2
5.	OKLAHOMA BASIC RATE INTERFACE TELRIC 1996-1998	2
6.	OKLAHOMA PRIMARY RATE INTERFACE TELRIC 1996-1998	2
7.	OKLAHOMA LOCAL SWITCHING TELRIC COST STUDY 1996-1998	2
8	OKLAHOMA TELRIC TANDEM SWITCHING USAGE COST STUDY 1996-1998	2
9	OKLAHOMA LSP TO SS7 STP TELRIC 1997-1999	3
10	FORWARD LOOKING COMMON COSTS	3
11	DIRECTORY WHITE PAGES FOR OTHERS TELRIC OKLAHOMA GROUP A 1997-1999	2
12	REVISED OKLAHOMA INTERIM NUMBER PORTABILITY 1996-1998	5
13	OKLAHOMA SIGNALING NETWORK TELRIC STUDY 1996-1998	3

* Some page values are estimates

Attachment DPR-4

ILLUSTRATIVE EFFECTS OF FILL FACTORS AND VENDOR DISCOUNTS ON EF&I AND MONTHLY COST

		90% Fill 40% Discount	45% Fill 40% Discount	45% Fill 10% Discount
EQUIPMENT INVESTMENT				
Account - ABC Type Equipment				
1 Equipment Investment (EF&I)		$100.00	$200.00	$300.00
2 Ratio of Material to Total EF&I		0.75	0.75	0.75
3 Sales Tax	(L1*L2*(.0825))	$6.19	$12.38	$18.56
4 Total EF&I Investment	(L1+L3)	$106.19	$212.38	$318.56
5 Telco Engineering	(L4 * factor (.01))	$1.06	$2.12	$3.19
6 Telco Plant Labor	(L4 * factor (.01))	$1.06	$2.12	$3.19
7 Shipping Expense and IDC	(L4 * factor (.01))	$1.06	$2.12	$3.19
8 Total Installed Cost	(L4 + L5 + L6 +L7)	$109.37	$218.75	$328.12
9 Power Investment	(L8 * factor (.01))	$1.09	$2.19	$3.28
10 Total Equipment Investment	(L8 + L9)	$110.47	$220.93	$331.40
11 Total Investment With Fill	(L10 / Fill Factor (1))	$110.47	$220.93	$331.40
12 Building Investment	(L11 * factor (.01))	$1.10	$2.21	$3.31
13 Total Investment	(L11 + L12)	$111.57	$223.14	$334.71
ANNUAL CAPITAL COSTS				
14 Depreciation	(L11 * .10) + (L12 * .10)	$11.16	$22.31	$33.47
15 Cost of Money	(L11 * .10) + (L12 * .10)	$11.16	$22.31	$33.47
16. Income Tax	(L11 * .10) + (L12 * .10)	$11.16	$22.31	$33.47
17. Total Annual Capital Cost	(L14 +L15 +L16)	$33.47	$66.94	$100.41
ANNUAL OPERATING EXPENSES				
18 Equipment Maintenance	(L11 * .10)	$11.05	$22.09	$33.14
19. Building and Grounds Maintenance	(L12 * .10)	$0.11	$0.22	$0.33
21. Miscellaneous Tax	(L13 * .01)	$1.12	$2.23	$3.35
22. Commission Assessment	(Sum(L17...L21)*.01)	$0.46	$0.91	$1.37
23. Total Annual Operating Expense	(Sum(L18...L22)	$12.74	$25.45	$38.19
24. Total Annual Cost	(L17 + L23)	$46.21	$92.39	$138.60
25. Total Monthly Cost	(L24 / 12)	$3.85	$7.69	$11.55